## DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-007530 Address: 333 Burma Road **Date Inspected:** 21-Jun-2009

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Xu Le Feng, Yu Dong Ping No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: TOWER** 

## **Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

## Outside Yard at Vertical Mill:

The QA Inspector randomly observed the vertical mill was idle and that there was no milling being performed on the skin plates on Lift 1 East Tower Shaft or Lift 2 East Tower Shaft at this time. Lift1 East has been flipped 180 degrees with the upper elevation now at the mill.

The QA Inspector randomly observed that no contract work was being performed in the interiors or on the exteriors of Lift 1 East Tower Shaft, Lift 2 East Tower Shaft or Lift 2 South Tower Shaft. The QA Inspector also randomly observed that welding had been performed over the coating in several areas on the base of Lift 1 East Tower Shaft. The attached photograph provides additional detail. The QA Inspector generated an Incident Report (TL-15) for the welding over the coating.

#### Heavy Equipment Shop Bay 11:

The QA Inspector randomly observed 2 ZPMC helpers utilizing angle grinders to blend the cover pass on the inside of the long seam between Skin Plates A and E on Lift 1 West Tower Shaft.

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The QA Inspector randomly observed 4 ZPMC helpers utilizing angle grinders to blend the cover pass on the outside of the long seam between Skin Plates C and D on Lift 1 West Tower Shaft.

The QA Inspector randomly observed ZPMC welder ID 042634, utilizing the Submerged Arc Welding (SAW) Process in the 1G (Flat Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2221-B-U3c-S-1 to weld the butt seams in spare shear flange assemblies at WJ's SD1-A6002-2-5B, SD1-A6002-3-5B and SD1-A6002-4-5B. The QA Inspector randomly observed ZPMC Quality Control monitoring weld parameters. Weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Jiang Xiao Hu ID 066155, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-2232-TC-U2-F to weld lifting lugs to Lift 4 East Skin Plate C. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 1 ZPMC helper utilizing an angle grinder to blend the tack welds in the root of the long seam between sections of Lift 4 West Tower Shaft Skin Plate C at WJ WSD1-FCSA4-2A/C-46. The attached photograph provides additional detail.

The QA Inspector performed a 15% Magnetic Particle Testing (MT) Verification of the butt seam weld between sections of Lift 4 South Skin Plate E at WJ SSD1-FESA4-1A/F-10A (B) and 11A (B) per ZPMC NDT Notification Sheet 003483. There appeared to be no indications after the re-work and the QA Inspector accepted the above listed welds.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





# **Summary of Conversations:**

No relevant conversations.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod 13482570045, who represents the Office of Structural Materials for

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your project.

**Inspected By:** Franco, Charlie Quality Assurance Inspector

**Reviewed By:** Clifford,William QA Reviewer